**Explaining Polarity of molecules**

**QUESTION: Explain the polarity of the following molecules**

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| **CBr4 (or CCl4 )** | **CH3Br** |
| **CH2Cl2** | **CHCl3** |
| **H2S** | **CO2** |
| **CH3Cl** | **NH3** |
| CF4 | **OCl2** |
| **COCl2** | **SiH4** |
| **SO2** | **NCl3** |

**1)** Elements M and X form a compound MX2. Atoms of element X have a higher electronegativity value than atoms of element M, therefore the M–X bonds are polar.  
Depending on what elements M and X are, molecules of the compound formed will be polar or non-polar.  
State the most likely shape(s) of the molecule if it is i) polar or ii) non-polar

Justify your answer and draw diagrams of the possible molecules with dipoles labelled.  You do not need to identify what elements M and X are.

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